Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MIKSA DE SORGO

Appeal No. 2001-0468
Application No. 09/151,886

ON BRIEF

Before McCANDLISH, Senior Administrative Patent Judge, McQUADE and NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 14, 16, 18 to 29, 31 and 33 to 44, which are all of the claims pending in this application.[1]

We REVERSE and REMAND.

[1] Claims 16 and 31 were amended subsequent to the final rejection.

BACKGROUND

The appellant's invention relates to a non-electrically conductive, low profile thermal dissipator for attachment to the heat transfer surface of an electronic component for the conductive and/or convective cooling of the component (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:[2]

Kesel 5,550,326 Aug. 27, 1996

The English Abstract of JP 63-173348 to Yasuyuki, published July 16, 1988 (Yasuyuki)

Claims 1 to 14, 16, 18 to 29, 31 and 33 to 44 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kesel in view of Yasuyuki.

[2] On page 10 of the answer, the examiner refers to U.S. Patent to 5,049,367 to Nakano et al. that has not been applied in the rejection under appeal. This patent will be given no consideration since it was not included in the statement of the rejection. See Ex parte Raske, 28 USPQ2d 1304, 1305 (Bd. Pat. App. & Int. 1993).

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejection, we make reference to the answer (Paper No. 15, mailed June 9, 2000) for the examiner's complete reasoning in support of the rejection, and to the brief (Paper No. 14, filed May 16, 2000) and reply brief (Paper No. 16, filed August 1, 2000) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1 to 14, 16, 18 to 29, 31 and 33 to 44 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). While obviousness is tested by what the combined teachings of the applied prior art would have suggested to one of ordinary skill in the art (see In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)), obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. See ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984).

The appellant argues that the applied prior art does not suggest the claimed subject matter. We agree.

All the claims under appeal require a generally planar thermal dissipation member formed of a thermally conductive, electrically-nonconductive ceramic material having a thickness of less than about 100 mils (2.5 mm). However, these limitations are not suggested by the applied prior art. In fact, the advantages of utilizing a thermally conductive, electrically-nonconductive ceramic material having a thickness of less than about 100 mils (2.5 mm) in a thermal dissipator are not appreciated by the prior art applied by the examiner. In that regard, while Kesel does teach a generally planar thermal dissipation member formed of a thermally conductive, electrically-conductive material (i.e., the metal sheet 1) having a thickness of less than about 100 mils (2.5 mm), Kesel does not teach or suggest using a generally planar thermal dissipation member formed of a thermally conductive, electrically-nonconductive ceramic material having a thickness of less than about 100 mils (2.5 mm). To supply these omissions in the teachings of Kesel, the examiner determined (answer, pages 4-5) that these differences would have been obvious to an artisan from the teachings of Yasuyuki. While Yasuyuki does teach the use of a generally planar thermal dissipation member formed of a thermally conductive, electrically-nonconductive ceramic material

(i.e., the alumina nitride plate 13), Yasuyuki does not teach or suggest that a alumina nitride plate having a thickness of less than about 100 mils (2.5 mm).

In our view, the only suggestion for modifying Kesel in the manner proposed by the examiner to meet the above-noted limitations stems from hindsight knowledge derived from the appellant's own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). It follows that we cannot sustain the examiner's rejections of claims 1 to 14, 16, 18 to 29, 31 and 33 to 44.

REMAND

The application is remanded to the examiner to consider the patentability of the pending claims in light of the following newly cited prior art taken alone, in combination or taken in combination with reference(s) of record (e.g., Kesel):
(1) U.S. Patent No. 4,914,551 to Anschel et al. which teaches the use of thin (i.e., about 2.5 to about 5.5 mils thick) heat

spreader 37 made from silicon carbide, aluminum nitride or copper-clad Invar™ secured to an electrical component by adhesive (see column 3, line 22 to column 4, line 48; column 5, lines 27-36);

(2) U.S. Patent No. 5,777,847 to Tokuno et al. which teaches that the heat spreader 502 can be made from a metal such as aluminum, an aluminum alloy, copper, a copper alloy, or copper tungsten, or a ceramic such as aluminum nitride (see column 7, lines 1-27);

(3) U.S. Patent No. 5,894,882 to Kikuchi et al. which teaches that the heat sink 67 is typically formed of a metal such as aluminum alloy or copper alloy or a ceramic material such as aluminum nitride or silicon carbide (see column 6, lines 1-4); and

(4) IBM Technical Disclosure Bulletin, "Aluminum Nitride Heat Sink to the Chip," which teaches using an aluminum nitride ceramic with a thickness of 60 mils as a heat material that is adhesively bonded to the back of a silicon chip mounted on a substrate.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 14, 16, 18 to 29, 31 and 33 to 44 under 35 U.S.C. § 103 is

reversed. In addition, the application has been remanded to the examiner for further action.

This application, by virtue of its "special" status, requires immediate action, see MPEP § 708.01 (Seventh Edition, Rev. 1, Feb. 2000).

REVERSED and REMANDED

HARRISON E. McCANDLISH Senior Administrative Patent Judge	)	
JOHN P. McQUADE Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JEFFREY V. NASE Administrative Patent Judge	)	

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